

were performed using both averages. Recent growth is deemed “high” growth, and historical growth is classified as “low” growth. Users of the projection spreadsheet (see below) can choose which growth they would like to assume.

Combining NPC and physicians is problematic since there are multiple “FTE Physician” equivalents used for NPCs. Ultimately, the choice of FTE weight represents the degree to which a NPC can “substitute” a physician. Although there are widely varying opinions on this matter, two alternative weights were used here. The Health Resources and Services Administration uses .5 for NPCs when calculating provider supply when designating Health Professional Shortage Areas. This served as the default weight. Given that new models may increasingly shift primary care to NPCs, this FTE weight may be low; in this analysis we also used .75 as an alternative estimate to test for sensitivity. Again, users of the projection spreadsheet can choose which FTE they would like to use (or specify their own, for that matter). Furthermore, users can specify an assumed growth in education throughput.

Population

As outlined in the report, there are three factors likely to lead to an increase in the demand for healthcare services. The population is increasing, the population is getting older, and the prevalence of chronic disease is increasing. Estimates of the first two were obtained from NC State Demographer population projections out to 2029—projections to 2030 assumed the rate of growth from 2028 to 2029 would apply to 2029 to 2030. The effect of aging was determined by calculating the average number of office-based physician visits for the national population in 2002 (Medical Expenditure Panel Survey) and applying the same rate to each age cell in subsequent years. Note that this is likely an underestimate—other data show that the average number of visits per age group grew considerably from 1990 to 2004,^{a,b} at least partially due to increasing chronic disease burden. There were some attempts to estimate the effect of increasing chronic disease on demand for healthcare services. Net increases (over and above the effect of population growth and aging) were in the single digit range; the method was deemed insufficiently tested to be included in this report. Thus, we mention the potential magnitude of, but do not formally include, chronic disease as a driver of projected demand.

Productivity

New healthcare delivery models were of great interest to the Steering Committee. With little empirical evidence to guide estimation of the net effect of new models on the demand for healthcare services, productivity factors were used to inflate the effective supply of providers. Thus, a 10% increase in productivity would increase the number of effective providers from 20,000 (for example) to 22,000. Again, the user can incorporate these assumptions into the model.

a Hing E, Cherry DK, Woodwell DA. *National Ambulatory Medical Care Survey: 2004 Summary*. Number 374. Hyattsville, MD: National Center for Health Statistics; 2006. Available from: <http://www.cdc.gov/nchs/data/ad/ad374.pdf>.

b Schappert SM. *National Ambulatory Medical Care Survey: 1990 Summary*. Number 213. Hyattsville, MD: National Center for Health Statistics